Lesson 23 - Application Of Food Combining Principles

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1. The Food Combining System

Most of the food combining rules were first set down long ago by such Hygienic pioneers as Doctors John H. Tilden and William Howard Hay, and they have been tested in practice by modern Hygienic doctors and many thousands of lay people. This empirical testing has resulted in some modifications of the original food combining principles. Other modifications continue to be evaluated as "gray" areas and are studied and tested.

What is needed by neophytes and old-timers alike is accurate, up-to-date information, clarification, simplification and a common-sense approach—a way to eliminate confusion and anxiety.

This lesson discusses meal-planning principles and their application. You will be given all the details you will need in order to learn to apply these principles. This lesson will also lead you through numerous examples of the correct application of each of the food combining rules that were discussed in Lesson 22.

2. Planning Meals

Meal planning advice is intended merely as a guide to enable the individual to work out his own menus. The object is to understand the principles of food combining so that you (and your students) will be independent and never at a loss, no matter where, in preparing meals from the foods at hand.

Food availability varies with location, season, climate, altitude, soil and market factors. If you know how to combine your foods correctly, you may usually select compatible combinations anywhere—at the market, at the home of a friend or relative, or even at a public eating place. An intelligent adult should learn these principles and learn to apply them. Soon the practice becomes habitual—almost automatic.

We will start with an outline of how to plan your daily food program.

If you have Dr. Shelton's book, *Food Combining Made Easy*, you will notice (pp. 55-57) that his daily menus usually include a breakfast of fruit, a starch meal for lunch, and a protein meal for dinner. He even includes such items as lamb chops and eggs on some of the menus (simply to show how to combine animal products, if you use them).

My daily menus (in this lesson) will also include three meals, even though it is best to eat only two meals on most (days. Many people do better with two meals daily, some do better alternating between two and three meals (two meals one day, three meals the next, etc.).

On days that you eat two meals, you may use the menus as a guide, selecting two meals each day from the variety offered. I would suggest selecting one fruit meal and one salad meal, being sure to include enough protein foods, according to your needs.

My menus will not advocate the use of a starch *and* a protein every day. My recommendation is to have some concentrated protein most days, and salad every day. Some people get along quite well with concentrated protein every other day, others need some every day. The amount of concentrated protein you need depends on how much you take at each sitting, your tolerance, and the efficiency of your assimilation. How much concentrated protein you need also depends on whether you are eating all raw food.

The proteins to be found in almost all vegetables and many fruits, though usually not concentrated, are of high biological value when eaten unchanged (without cooking), and are an important source of dietary protein. People on all-raw-food diets may need less concentrated protein, but it is an individual matter. Your own needs may best be ascertained through personal experimentation.

On the other hand, people who eat some cooked starches and cooked combination foods should realize that these are supplementary sources of dietary protein, and that it may not be necessary to also use concentrated proteins on every day when concentrated starches or combination foods are used. Again, this is an individual matter.

But four ounces of nuts or seeds at one meal, a serving of brown rice at another meal, and a serving of dates at a third meal on the same day, may easily result in overburdening the body with too many concentrated foods, and too much protein.

How much concentrated protein you need is also dependent on another extremely important factor. How active are you? How much regular vigorous exercise are you getting? Everyone should make it a point to use the body energetically every day. People who engage in little physical exertion need less food, particularly less protein. Sedentary people who consume more food, especially more protein, than their bodies are capable of metabolizing efficiently, are incubating future serious pathological problems.

I find that I personally need to take some concentrated protein almost every day. I usually can eat only two ounces of nuts and/or seeds at a sitting, supplementing my protein needs at other meals with other lower protein foods, such as large green salads and avocados. I use alfalfa sprouts with almost every salad meal, and sometimes use lentil and mung bean sprouts.

My recommendation includes a program that does not utilize concentrated starches or combination foods (whether raw, sprouted or cooked) more than four or five times weekly. You will note that the menus which include some cooked food indicate cooked foods not more than four times weekly. It is hoped that cooked foods will gradually be de-emphasized even more.

I am not, by any means, saying that Dr. Shelton's fruit-starch-protein daily menus may not be applicable to some people, nor am I saying that some people may not use more fruit and less concentrated foods than are included in these menus. I am simply offering suggested alternatives, determined through research and practical experience of many years and by many people.

Study the daily menus in this lesson, compare them with Dr. Shelton's and others, if you wish and determine, by experimentation, which daily meal plan is best for you.

2.1 Your Daily Food Program

Breakfast: Starting with breakfast, you have three ways to go, with many variations of these three basic choices. The first choice—the best choice for most people—is the "no-breakfast plan." That would mean you would be eating only twice daily.

The second choice is a light breakfast of one kind of juicy fruit—citrus or melon or any subacid fruit, such as grapes—no dried fruit. *Fresh fruits are the best choice for the first food of the day*—one or two varieties. They should be eaten whole, uncooked and unjuiced. Eat until pleasantly satisfied, not stuffed. Three to five oranges, or a grapefruit and two oranges, or one-eighth of a medium watermelon, or a medium cantaloupe or honeydew melon, or one pound of grapes, should be maximum amounts for an all-fruit first meal of the day. Most people would want less.

The third breakfast choice is for people who find that they do better with a more substantial breakfast. This is preferred by some men (and also a few women), and especially by individuals who will be away from home during the day and will perhaps be unable to obtain good food conveniently. This plan might also be preferred by those who find that they feel better if they eat some protein early in the day —notably, people who might have the problem of low blood sugar (hypoglycemia). However, many people who have had hypoglycemia (or have been diagnosed as hypoglycemics) have successfully progressed to the two-meal-a-day plan.

This more substantial breakfast might consist of citrus or other acid fruit, such as pineapple or strawberries followed by raw, unsalted nuts and/or seeds. It might be advisable to wait thirty minutes or longer before eating the nuts, to allow the sugars in the fruit a chance to leave the stomach. This is a precaution often taken by people with impaired digestions. Maximum amounts of fruit in such a meal should be about half the quantities used when eating only the fruit. Two to four ounces of nuts and/or seeds may be used. Lettuce and/or celery would be an excellent addition to this meal.

This type of more substantial breakfast, or brunch, might be more advantageously used around noon, rather than early in the morning, if the circumstances permit, and if you are willing to postpone eating until after you have done something to "earn" your meal.

Luncheon: Now we get to luncheon, where we again have multiple choices. Even if you have not eaten breakfast, you might prefer to have a lunch of juicy fruit or melon. If you choose melon (most people do better with melon only, only one kind) eat as much as you want, but stop before you are

uncomfortably full. Some people have no problem when combining more than one kind of melon, or combining melon with certain subacid fruits. (See Lesson 22.)

If you decide on a mixed fruit lunch, this is an excellent and satisfying meal, if you are careful about the combinations. You should not use acid fruit with sweet fruit; for example, don't use oranges and bananas at the same meal. Your mixed fruit lunch could consist of grapes, peaches, apples or other fresh subacid fruit—one or two varieties (two or three pieces)—plus one or two bananas and/or one-half of a medium avocado. It is better to choose either the bananas or the avocado. Lettuce and celery also make an excellent addition to this meal, especially if you are including avocado.

If desired, you could also have a small serving of figs, dates, raisins, soaked dried apricots, or other dried fruit, *if you have not had avocado*. Or you could occasionally have acid or subacid fruit, lettuce and celery, and four ounces of cheese, if you use it. If you do use cheese, use it sparingly and rarely. Actually, lettuce and celery may be used with almost any fruit meal, but I would not recommend their use with melon.

Another type of luncheon, especially if you have had a fruit or melon breakfast, would be a salad meal. You could have as much salad as you want, consisting of one or more dark green varieties of lettuce: Romaine, Boston, Bibb, leaf, or any garden lettuce (not pale iceberg head lettuce), plus tomatoes, cucumber, celery, or any nonstarchy vegetables, along with or followed by avocado or nuts or seeds.

The Evening Meal: New we get to the evening meal, where the choices are almost infinite. Much depends on what you have already eaten. If you have already eaten your fill at breakfast and lunch, you need very little additional food, perhaps none.

If you ate a citrus and nuts breakfast, and a salad and avocado lunch, you might want a mixed fruit supper. If you had a fruit or melon breakfast and a salad and nuts lunch, you might want a salad and avocado supper. If you have not yet had any nuts that day, you could have salad and nuts for supper.

If you are still using cooked food, it is better to eat it in the evening, after the day's work is done, when you may rest and relax, and accomplish better digestion. Many people have a tendency to overeat of the cooked food—so eat a large salad first; this may help you to eat more conservative amounts of cooked food. Try to avoid second helpings, and stop before you feel stuffed. In any event, it is preferable to eat raw food before cooked food, juicy food before dry food, and easy-to-digest food before foods that need more time for digestion (such as starches, proteins and fats).

2.2 Sequence of Eating

It is true that all the food will be mixed in the stomach, but the so-called "Ideal Order of Eating" is helpful to some extent.

Eat raw food before cooked food. Raw foods contain live enzymes, which influence digestive efficiency; cooking destroys all enzymes. Moreover, the consumption of raw foods stimulates gastric enzyme secretion, which is necessary to initiate good digestion. Besides, the more raw foods eaten as the first course, the less cooked foods will be eaten.

Eat juicy foods before dry foods. During the process of digestion, hydrolysis occurs—that is, the combining of the food with liquid from the body's reserve supply. Juicy foods contain some of their own liquid, which facilitates the initial processing of the food mixture. (Do not take water with dry foods as an alternative—this causes problems—see Rules for Drinking.)

Eat easy-to-digest foods before foods, that require a longer digestion time. The digestive process starts while the meal is being consumed, and the most liquid portion of the food mixture, the chyme, leaves the stomach at intervals. Thus, some of the easy-to-digest foods may be processed and leave the

stomach before the end of the meal. Even if this does not occur, if the concentrated foods are eaten last, you may possibly eat less of them, which would be an advantage for many people, especially those who have a tendency to overeat of the concentrated proteins and starches.

An exception may advantageously be made in the case of eating salad alternately with nuts, rather than consecutively. Many people find that eating the salad along with the nuts actually aids digestion, and also eliminates the dry or thirsty feeling that sometimes follows the eating of nuts after the salad. Do not use the tomato or lettuce to moisten the nuts to help get them down. The nuts must be thoroughly chewed.

Dr. Vetrano's article on the "Sequence of Eating" indicates that she does not attach importance to the sequence of eating concentrated foods and less concentrated foods. You might want to experiment to determine your own preference.

When combining several fruits at a meal, it is a good idea to eat the sweetest variety last. (Oranges after grapefruit; bananas, persimmons, dates, figs, after grapes, plums, apples etc.) If you follow a sweet fruit with one that is less sweet, the comparison actually seems to make the less sweet fruit usually taste acid or sour.

On the other hand, I sometimes like to eat a small amount of subacid fruit after the sweet fruit to dilute the excessively sweet taste at the end of the meal. Either way, there is no food combining principle involved—please yourself.

If you sometimes would like to eat fruit in combination with a mixed vegetable meal, the best way would be to eat the fruit first, and then, if possible, delay at least fifteen minutes before eating the other foods, starting with the salad.

As previously indicated, exceptions to this arbitrary "eating order" are not serious. After all, it does all go into the same stomach, and is quickly combined into a mobile mixture, the chyme.

2.3 Rules for Drinking

Drink no beverage except pure water, only when thirsty, and not with meals, as drinking at meal time dilutes the digestive juices and retards digestion. Most beverages commonly consumed are loaded with harmful substances, interfere with the digestion and assimilation of foods, and may be addictive and destructive of vital organs.

No particular amount of water is necessary; thirst is the best guide. Hygienists usually drink very little water because no spices or seasonings are used, and there is so much liquid in foods as provided by nature. If thirsty, one may drink ten to twenty minutes before meals, one-half hour after a fruit meal, two hours after a vegetable or starch meal, and four hours after a protein meal. It is best to sip water, not gulp.

If one ignores the feeling of thirst that sometimes follows a meal and resists the impulse to drink, the thirst may soon disappear, having been satisfied by digestive secretions, and good digestion will be accomplished (since the digestive juices will not have been diluted). If very thirsty, and you feel that you must drink, try a few sips, instead of gulping large quantities of water. Drinking water with meals, or directly after meals, causes the stomach to dilate, and may lead to chronic indigestion, gastritis, ulcers, or even cancer.

Juices: Foods should not be juiced for use as a beverage, but should be eaten in their whole state. If exceptions to this rule are occasionally made, it should be with the full awareness that this fragmented food does not contribute anything "extra" to your health or nutrition, and is definitely a compromise of Hygienic principles.

In fact, this bombardment of the body with concentrated portions of fragmented foods may actually cause unpleasant, even serious problems. If carrot juice is consumed in large quantities, it may cause carotinemia and discolor the skin—the liver cannot handle too much of it. I have seen yellow palms (a symptom of carotinemia) that, fortunately, disappeared when the juicing habit was discontinued (prior to irreversible damage).

If you do insist on using juices, it would be best to follow the following guidelines: Never use large quantities of juiced foods and don't use them as part of your regular food program. If you use juice occasionally, four to six ounces of vegetable juice may be taken twenty to thirty minutes before the evening meal at which a salad and, perhaps, some cooked food are eaten. Fruit juice— preferably fresh-made at home—may occasionally be used prior to a fruit meal. However, keep in mind that juices, either fruit or vegetable, are not beverages but fragmented foods.

The only time juices are indicated as part of a Hygienic program is when breaking a fast (though many people do very well in breaking a fast on whole fruit) or, very judiciously, as a temporary elimination diet. See Dr. Vetrano's article "Mono-Eliminating Diets". More details about the inadvisability of juicing foods will be given in a future lesson.

Pure water: The only beverage which should be used when thirsty is pure water. Avoid chlorinated city water, if you can. Don't drink fluoridated water; do whatever you must to avoid it. Using fluoridated water in cooking is even worse, as it concentrates the fluorides, causing the water to be even less safe for use. Osteoporosis can occur from drinking fluoridated water. Sodium fluoride inactivates magnesium and some amino acids, and inhibits enzyme activity. Never drink artificially softened water because the miscellaneous inorganic minerals and impurities have been replaced by salt.

Minerals in water inhibit the absorption of the water. The minerals are inorganic substances and must be eliminated by the body. They are usually suspended particles of dirt and stone. These inorganic minerals are usable only by plants, which convert them to organic minerals, thus usable by man.

Professor Henry Sherman, in. his book. *The Chemistry of Nutrition*, says he doesn't like to refer to such elements as calcium and iron as minerals, which may imply that they come directly from the mineral kingdom.

He says that these elements are usable by humans only when they occur organically in plant tissues—as complex, organized structures within the plant. This is the way in which these elements are adaptable to animal life, and this is the way we can make the best possible use of them.

Pure water from a rock spring is excellent; fresh rain water (if it could be gathered unpolluted) and distilled water are best. More detailed information about water, beverages and drinking are given in another lesson.

2.4 Modifications

People with efficient digestions can withstand modifications more freely; people with impaired digestions need to utilize as ideal an eating pattern as possible.

2.5 Cooked Foods

No cooked food could even come close to the nutritional value of foods which are used as they grow in the garden and orchard. If you do use some cooked foods, choose the best available and prepare them conservatively and correctly. Lessons 24, 25 and 26 will help in the selection, storage, preparation and serving of foods for the best nourishment. This lesson will simply provide a preliminary outline of foods which may be cooked.

The variety of acceptable cooked foods is quite extensive. It includes such meals as broccoli and lentils, or green beans and steamed or baked potatoes, or eggplant casserole, vegetable chop suey, a mixed vegetable casserole, or thick bean or vegetable soup. Baked parsnips, beets and carrots have a delightful sweet taste and need no seasonings. You may select globe artichokes, cauliflower or sweet corn—the choices are many.

Plain steamed vegetables need no seasoning if they are not overcooked; most vegetables cook in ten minutes or less. Casseroles may require some seasoning, but we use no salt or pepper. Season with parsley, celery or sweet bell pepper. Recipes for casseroles will be included in the lesson on food preparation.

The best way to use whole grains is to sprout them.

Even those people who cook some of their vegetables should try to use as many as possible in the raw state. Try young sweet corn or sweet potatoes uncooked. Ground (Jerusalem) artichokes are delicious raw. Raw young sweet peas or edible pod peas are delicious uncooked. In fact, the edible pod peas are a gourmet delight. Of course, all meals that include some cooked food should be preceded by a large raw salad.

Individual needs: The foregoing suggestions for meals including uncooked and cooked foods are generally applicable to people not suffering from serious pathological problems. This program may have to be adjusted in various ways to provide for the nutritional needs and capacities of those whose health is impaired. It is not necessary or advisable to try to conform to a "blueprint" program. Certain people may have emotional needs, or other reasons, for requiring other foods.

We must think in terms of careful consideration of the needs of the individual. It is important to see each person in relationship to his emotional as well as his physical needs, and in relationship to his total life situation.

3. Daily Menus

3.1 Salads

Eat as much salad as you want—but don't stuff yourself. Use one or two varieties of lettuce from among the dark garden varieties, such as Romaine, Bibb, Boston, leaf or any garden lettuce (except iceberg). Endive or escarole may be included as a variety of lettuce, if it is not bitter. In addition to the lettuce, choose two or three salad vegetables from among the following: celery, cabbage, cucumber, sweet pepper, or any young, tender greens (kale, turnip, dandelion, collard). Broccoli flowerets and leaves are particularly good salad vegetables. Cauliflower flowerets are also very good in the salad. Green beans, peas, chayote, zucchini or yellow summer squash are good choices when young and tender. Raw carrots or sweet potato may be used except with a protein meal; tomato may be used except with a starch meal.

3.2 Four Weeks of Menus

3.3 Two Weeks of All-Raw-Food Menus - First Week

	Breakfast	*Lunch*	*Supper*
Sunday	Strawberries	Salad Raw sweet corn (young/tender) Raw carrots Alfalfa sprouts	Salad Tomatoes Raw broccoli Macadamianuts
Monday	Oranges	Salad Wheat or rye sprouts Avocado	Salad Tomatoes Alfalfa sprouts Almonds
Tuesday	Papaya	Lettuce Blueberries (or other subacid berries) Persimmons Fresh or dried figs	Salad Raw turnips Alfalfa sprouts Lentil sprouts
Wednesday	Cantaloupe	Lettuce, celery Pears Sweet plums Soaked dried apricots	Salad Tomatoes Raw zucchini squash Cashews
Thursday	Kiwi Fruit Filberts	Watermelon	Salad Alfalfa sprouts Edible pod peas Raw cauliflower or carrots Avocado
Friday	Fresh ripe pineapple	Salad Alfalfa sprouts Raw cauliflower Jerusalem artichokes Avocado	Lettuce Peaches Papaya Bananas
Saturday	Casaba melon	Lettuce Grapes Apricots Dates	Salad Tomatoes Alfalfa sprouts Pecans

3.4 All-Raw-Food Menus - Second Week

	Breakfast	*Lunch*	*Supper*
Sunday	Honeydew Melon	Lettuce, celery Jonathan apples Plums Avocado	Salad Tomatoes Alfalfa sprouts Pecans
Monday	Fresh ripe pineapple	Salad Tomato Alfalfa sprouts Sunflower seeds	Lettuce, celery Pears Grapes Dates
Tuesday	One grapefruit Two oranges	Salad English peas Raw broccoli Avocado	Salad Tomato Alfalfa sprouts Brazil nuts
Wednesday	One or two grapefruit Pecans	Watermelon	Salad Raw chayote Alfalfa sprouts Mung bean sprouts
Thursday	Mangoes	Lettuce Cherries Bananas Dried soaked apricots	Salad Edible pod peas Coconut
Friday	Strawberries	Salad Alfalfa sprouts Raw sweet potato Raw cauliflower Avocado	Salad Tomato Raw broccoli Filberts
Saturday	Grapes	Lettuce Peaches Fresh figs Persimmons	Salad Tomato Alfalfa sprouts Almonds

3.5 Menus Which Include Some Cooked Food - First Week

	Breakfast	*Lunch*	*Supper*

Sunday	Watermelon	Salad Tomatoes Eggplant casserole With cashew nut topping or Mixed vegetable casserole with sesame seeds	Lettuce, celery Apricots Cherries Bananas Raisins
Monday	Grapes	Salad Alfalfa sprouts English peas (raw) or Lentil or mung bean sprouts Avocado	Salad Tomatoes Raw broccoli Pecans
Tuesday	Honeydew melon	Lettuce Red Delicious apples Persimmons Bananas	Salad Alfalfa sprouts Lentils with steamed yellow squash
Wednesday	Grapefruit Filberts	Watermelon	Salad Edible pod peas (raw) Alfalfa sprouts Avocado
Thursday	Fresh ripe pineapple	Salad Young tender raw kale Wheat or rye sprouts Avocado	Salad Green beans (raw or cooked) Raw carrots Steamed or baked potato*
Friday	Oranges Lettuce Avocado	Lettuce, celery Grapes Persimmons Dates	Salad Tomatoes Alfalfa sprouts Sunflower seeds
Saturday	Kiwi fruit Almonds	Casaba melon	Salad Alfalfa sprouts Vegetable chop suey Brown Rice

* Sweet potatoes may be eaten raw, but white potatoes should not. It is advisable to dextrinize the starch in white potatoes, by cooking, to render them suitable as food.

3.6 Menus Which Include Some Cooked Food - Second Week

	Breakfast	*Lunch*	*Supper*
Sunday	Honeydew melon	Salad Globe artichokes (raw) Steamed broccoli Alfalfa sprouts	Lettuce, celery Strawberries Cashews
Monday	Raw fresh pineapple	Salad Tomatoes Raw yellow squash Macadamia nuts	Celery McIntosh apples Plums Avocado
Tuesday	Grapefruit Almonds	Lettuce Cherries Peaches Dried figs	Salad Alfalfa sprouts Vegetable stew with garbanzo beans
Wednesday	Strawberries Oranges	Salad Edible pod peas Sweet potato Avocado	Salad Tomatoes Alfalfa sprouts Pecans
Thursday	Kumquats Winesap apples	Lettuce, celery Grapes Bananas Soaked dried apricots	Salad Alfalfa sprouts Steamed or baked butternut squash Green beans (raw or cooked)
Friday	Cantaloupe	Salad Alfalfa sprouts Avocado	Salad Tomatoes Raw broccoli Almonds
Saturday	Grapefruit Oranges	Lettuce Golden Delicious apples Fresh figs Bananas	Salad Alfalfa sprouts Kasha (Buckwheat groats) or (Wild rice casserole) or (Millet casserole)

3.7 Recap of Concentrated Foods in Sample Menus (Number of Times Used Each Week)

	Raw Food Menus		*Menus With Some Cooked Food*	
	First Week	Second Week	First Week	Second Week
Concentrated Protein/Fat (Nuts and Seeds) Use 2 to 4 oz.	5	6	5	5
Combination Foods Starch/Protein (Coconut, Lentil Sprouts, Lentils, Mung Bean Sprouts, Rice, Wild Rice, Kasha, English Peas, Garbanzo Beans)	1	3	4	2
Starch foods (Jerusalem Artichokes, Globe Artichokes, Corn, Carrots, Potatoes, Sweet Potatoes) Use 1/2 to 3/4 cup	3	2	1	3
Fat/Protein (Avocado) Use up to 1/2 Medium Size	3	3	4	3
Concentrated Sweet Fruits (Dried Fruits) Use sparingly, e.g. up to 8 dates	3	2	2	2

4. Mono Meals And Mono Diets

Primitive man, in his pristine life in the forest, probably ate one food at a time, depending upon the availability of the food. Eating only one food at a meal is known as a monotrophic meal. If all meals over a period of time consist of a single food, such as oranges or grapes or watermelon, this would be called a monotrophic or "mono" diet.

4.1 Advantages of Mono Meals

There are advantages to the use of monotrophic meals, and it is recommended that at least the first meal of the day be a mono meal and preferably be of one kind of juicy fruit or melon. Obviously, the

digestion of a mono meal would not be subject to the adaptation problems that are sometimes experienced (even to a minimal degree) when so-called compatible foods are combined. For instance, even when several subacid fruits are combined, there may be subtle or overt differences in degrees of alkalinity or acidity, or in liquid or sugar content, or in digestion time. Most fruits lend themselves very well to monotrophic meals. It would be advantageous to program at least one mono meal daily—for the first food of the day.

4.2 Mono Diets Not Recommended for Regular Use

I do not endorse the use of a monotrophic diet for extended periods or regularly for several days every week, nor do I endorse the regular or extended use of a diet consisting of all monotrophic meals, i.e., each meal consisting of a single food, e.g., one kind of melon for one meal, grapes for another meal, romaine lettuce for another meal, alfalfa sprouts for another meal. I do not believe this would be conducive to optimal nutrition, nor do I believe that all types of Hygienic foods lend themselves optimally to this usage. For example, romaine lettuce and nuts or seeds combine well; this combination has been observed to produce more efficient digestion of both foods.

Several days on a mono diet, followed by several more days on monotrophic meals, immediately following a prolonged fast—or, perhaps, during a flareup of digestive problems—may prove to be very beneficial. But people who implement diets consisting of all mono meals usually concentrate on fruit and neglect nuts and green leaves. This can be damaging, even disastrous. Such a practice may ultimately result in protein deficiencies and other serious pathological problems.

Dr. Herbert M. Shelton says (*The Hygienic System, Volume II, Orthotrophy*, Page 223): "As there are no pure frugivores, all frugivores eating freely of green leaves and other parts of plants, man may, also, without violating his constitutional nature, partake of green plants. These parts of plants possess certain advantages, in which fruits are deficient. Actual tests have shown that the addition of green vegetables to the fruit and nut diet improves the diet."

In the June 1976 issue of Dr. Shelton's Hygienic Review, Dr. Shelton says: "If man is a frugivore, as we have tried to demonstrate, then his natural diet should consist of fruits, nuts and green vegetables. The inclusion of tender, succulent green leaves, stems and flowers should not be considered a violation of his constitutional nature, as practically all animals in nature consume green foliage of one kind or another. For example, the frugivora consume large amounts of wild celery and other leafy plants along with their fruits and nuts. At times, even the carnivora consume large amounts of vegetation. Green leafy plants may be regarded as a wild card throughout nature. Whatever else an animal eats, whatever else it is specifically adapted for, some green leafy food is invariably included in the diet.

"Besides being specifically adapted to his digestive mechanism, fruits are also appealing to man's visual, olfactory and gustatory senses. They require no cooking, no dressing, no seasoning, no utensils, and hardly any cultivation, considering the abundance of wild fruit trees. Could any other food be more natural for us? With the addition of nuts and green vegetables, the fruitarian diet is as nutritionally sound as it is biologically correct."

Green leafy vegetables are more abundant in alkaline minerals than fruits. They are an excellent source of calcium, iron and other valuable minerals. They are rich in vitamins and contain small amounts of protein of the highest quality and biological value. They are the richest source of chlorophyll, such as only green plants can provide.

The analysis of chlorophyll shows it to be almost identical with the blood hemoglobin, except that the blood contains iron and chlorophyll contains magnesium. Increasing the amount of green leafy vegetables in the diet has been known to aid the body to correct secondary anemia.

The scientist, Frans Miller, wrote, "Chlorophyll has the same fast blood-building effect as iron in animals made anemic." The regenerative effect of crude chlorophyll from green leaves (not pure chlorophyll) was demonstrated through numerous scientific experiments in this country and abroad. (See Viktoras Kulvinskas article on chlorophyll.)

Green leaves convert sunlight into food by a process called photosynthesis, aided by the green pigment chlorophyll. Photosynthesis is the production of carbohydrate, in the presence of carbon dioxide, water and light. Since only green plants can do this, they are the most important things on our planet,, because they make possible the continuity of life.

Dr. Virginia V. Vetrano says (Dr. Shelton's Hygienic Review, January 1975, Page 116): "The Hygienic doctor has always advocated that some vegetables, particularly leafy vegetables, be eaten along with the fruit and nut diet, mainly because of the protein content in leafy vegetables. Most individuals have a difficult time adjusting to eating only nuts for protein and take an insufficient amount of protein at first; proteins of high biologic value are easily supplied by adding green vegetables to the diet."

Dr. Vetrano has also repeatedly advocated the regular use of nuts in the diet—in fact, they were served at the Health School every day. She is convinced that this source of concentrated protein is a necessary part of the daily diet. She says that whole nuts should be used, but that freshly-made nut butter or ground nuts can and should be used, if an individual does not have good teeth. (Dr. Shelton's Hygienic Review, February 1976, Page 135).

Dr. Shelton had many young people come to him during the time that Arnold Ehret's dietary system (*The Mucusless Diet*) was in the heyday of its popularity. These young people had been on his low or no (concentrated) protein diet for several years or longer and were suffering from weakness, ease of fatigue, and transverse and longitudinal ridges in their fingernails. After studying their problems for a while, he came to the conclusion that the problem was nothing more than a protein deficiency. He fasted them for three days, added protein to their diets, and they all recovered. (Dr. Vetrano, Dr. Shelton's Hygienic Review, October 1974).

I myself have repeatedly encountered individuals who, for as long as six months to a year after a fast, were becoming weaker and more enervated with each passing day—even having fainting spells. In every case, they had been convinced that concentrated proteins (nuts and seeds) were unnecessary, even inadvisable. When they added nuts and seeds to their diets, spontaneous and continuous improvement followed in every case.

Dr. Burton says (See his article "The Hygienic Diet" in Lesson 22): "I personally view the diet containing a large proportion of fresh fruits and vegetables, accompanied by three to four ounces of concentrated protein (nuts and seeds) as being the most satisfactory." He says we should attempt to secure our nutrients from a wide variety of foods, though, obviously, not at the same meal.

True that protein deprivation has to be prolonged and extreme in order to produce obvious signs of its inadequacy. Dr. Burton also makes the point that the varying needs and capacities of individuals must dominate in establishing requirements.

Eat a variety of Hygienic foods. Overeating of citrus and other fruits may be more easily avoided if it is thoroughly understood that a meal program which includes a variety of Hygienic foods, including fruits, nuts and seeds, green leafy vegetables, and sprouted seeds, is the best road to optimal nutrition.

It is not difficult to fall into the trap of the overeating of fruits. They are the most delightful of foods. They are also among the finest and best of foods, if properly used.

In many respects, I empathize and even tend to agree with those who maintain that the delights and nutritional value of fruits are unsurpassed. If, in addition, nuts, seeds and sprouts, and chlorophyll-rich

green leaves are not neglected, optimal nutrition would be assured.

Dr. Esser really brings it all together with this sage observation: "Fruits and nuts are the perfect foods for man, but in the civilized areas of the world it is virtually an impossibility to obtain a sufficiently rounded supply for perfect nutrition and health. Therefore it is necessary to supplement them with vegetables. It will be found that vegetables are delicious and succulent."

I know it was a great relief to me, after my 29-day fast, when I was (after almost two weeks on fruit juices and fruits) at last given something to eat that was not sweet. When I was permitted to have at least one salad meal every day, with nuts or avocado or coconut or raw sweet corn, my improvement, weight gain and energy multiplied.

Recap: Monotrophic fruit meals are excellent; a total, diet of monotrophic meals is not advisable. Since the usual monotrophic meal consists of one kind of fruit or melon, it would seem that at least one meal daily (or, at the very least, one meal every second day) should consist of several salad vegetables and a protein (or possibly a starch).

But keep it simple! The less complex our food mixtures, and the simpler our meals, the more efficient will be our digestion, 'and the better our health. Few foods at a meal, with sufficient variety of different types of foods over the period of several meals to insure that the body gets all the nutrients it needs, is the ideal Hygienic food program.

Relationship of the diet to the acid-alkaline balance of the body: In general, the diet should consist of at least 75% alkaline-reacting foods and 25% or less of acid-forming foods. Most foods with high protein content are acid-forming. Adherence to a varied Hygienic diet, and to the other principles of Natural Hygiene (especially regular, vigorous exercise) will enable your body to adequately monitor its own acid-alkaline balance, since there is a buffer action in the organism which serves to maintain an equilibrium between alkalinity and acidity. Minerals play an important part in the regulation of this function.

Animal proteins, which contain sulfur, uric acid and other acid end-products, tend to leach the tissues of their alkaline salts. These alkaline salts (minerals) are particularly needed by the cells to buffer and render such end-products less acid, and thus less irritating to the cells and tissues.

The alkaline properties of vegetable and nut proteins help to maintain the acid-alkaline balance of the body. Thus, correct eating (and exercise) are the keys in maintaining the acid-alkaline balance. Eating vegetables helps to maintain your acid-alkaline balance. If only fruits are eaten, the balance tends to swing to the alkaline side eating only proteins swings it to the acid side. Bananas are neutral if you are in good health, but otherwise they are slightly alkaline.

4.3 Monotrophic Diets as "Elimination Diets"

"Elimination diets," which can be mono-diets, are often referred to under the misnomers "juice fasts" or "fruit fasts." Diets that are not stressful on the body and allow it to better perform its eliminative functions are sometimes useful when urgent symptoms require the temporary cessation of normal food intake, and it is not possible to go to bed and fast. However, the substitution of a long-term juice or fruit diet, when a fast is indicated, may be unwise and wasteful of the body's energy, because this does not accomplish the striking long-term benefits of the fast with nothing but distilled water. Nevertheless, a temporary juice diet or fruit diet may be indicated in some cases. If serious problems exist, a professional Hygienist can help to make this choice or decision.

There are other types of "elimination diets" (some not monotrophic) that are sometimes prescribed where a fast must be postponed, or should not be undertaken at the particular time.

"Elimination diets" are low in proteins, carbohydrates and fats. This causes the cells to use stored reserves to meet their requirements. During such a diet, the body can eliminate toxic matters and accumulated wastes, but never as efficiently or thoroughly as it would during a fast. The fast is always more efficacious in eliminating toxic wastes than is any kind of elimination diet. Greater benefit can be expected from one week of a complete fast than from two or three weeks of an elimination diet.

Further, a mono diet (the use of one food only—such as citrus, grapes or watermelon) may result in the production of imbalances in the body. During a total fast, the body is better able to monitor its own nutrition in a more balanced manner from the use of nutriments stored in the body.

A total fast increases metabolic efficiency. For example, the process of energy release from glucose (stored as glycogen in the liver) which is at 25% efficiency when eating, is increased to 45°/o efficiency when fasting (according to Dr. Alec Burton).

On a monotrophic diet, there is often a tendency to feel hungry and unsatisfied, while, during a total fast, hunger pangs usually disappear.

As you can see, the uses of monotrophic diets are limited. (See Dr. Vetrano's article "Mono-Eliminating Diets".)

5. Application Of The Food Combining Rules

You will note that the discussion of a particular food combining rule will frequently overlap and dovetail with other food combining rules, since they are all closely interrelated.

Since starch digestion begins in the mouth with the action there of the enzyme ptyalin and requires an alkaline or neutral medium—while protein digestion begins in the stomach, where acid enzymes are secreted when protein is eaten—the first two and most important food combining rules seem obvious.

5.1 Carbohydrates with Acids or Proteins

1. *Never eat carbohydrate foods and acid foods at the same meal.*
2. *Never eat a concentrated protein and a concentrated carbohydrate at the same meal.*

Carbohydrates include starches, sugars and cellulose. Lesson 22 demonstrated in great detail how incompatible combinations such as protein with carbohydrates reduce and inhibit the efficiency of digestive enzymes and subject the foods to decomposition in the digestive tract.

Some illustrations of combinations at the same meal which can produce this abortive effect are:

- Potatoes or other starchy vegetables with tomatoes or other fruit
- Starchy vegetables with nuts or other concentrated proteins
- Grains or legumes with tomatoes or other fruit
- Grains or legumes with nuts or other concentrated proteins

This means that when people eat meat and potatoes together, or a meat sandwich, they are not only consuming foods that cause problems when eaten separately (meat, bread), they are also compounding

the problem by ingesting them at the same meal with foods that require different conditions for digestion.

Tomatoes (acid fruit without the sugar content of other acid fruits) may be used with the vegetable salad or with any green or nonstarchy vegetable. They may also be eaten with protein/fat foods like nuts, cheese and avocados.

This seems to contradict Food Combining Rule No. 6, prohibiting the acid-protein combination. However, in actual practice, most Hygienists do use tomatoes with nuts and avocados rather freely. Both Dr. Shelton and Dr. Vetrano have come to consider these combinations acceptable and even desirable.

But Food Combining Rules Nos. 1 and 2 are extremely important, and there is general agreement among Hygienic professional and lay people that acids should not be used with starches nor with foods which combine concentrated starches with concentrated proteins (grains, legumes).

Since soy beans are higher in protein and fat, but lower in carbohydrates than other beans, there might be some possibility of combining them with tomatoes. I have experimented with this combination and have rejected it for my own use.

Any meal which includes cooked starches, or any cooked food, should begin with a large green salad. If you do use cooked foods, you should *always* use some raw food at the same meal, preferably as the first course.

Foods in the slightly starchy category, such as carrots, are best used with starchy vegetables like potatoes. When eating starch/protein foods, such as rice or beans, it is best to use green or nonstarchy vegetables only. Green and nonstarchy vegetables contain very small amounts of proteins and carbohydrates, and thus will not further complicate the digestion of the combination foods.

5.2 Some Examples of Percentages of Protein and Carbohydrate Content Of Various Categories of Foods

		Protein Content	*Carbohydrate Content*		
Concentrated Protein Foods:	*Almonds*	18.6%	19.5%		
		Sunflower Seeds	24%	19.9%	
			Cashews	17.2%	29.3%
Starch/Protein Foods	*Brown Rice*	7.5%	77.4%		
		Wild Rice	14.1%	75.3%	
			Fresh Coconut Meat	3.5%	9.4%

Starchy Vegetables	*Yam*	2.1%	23.2%		
		Potato	2.1%	17.1%	
Mildly Starchy Vegetables	*Winter Squash*	1.4%	12.4%		
		Carrot	1.1%	9.7%	
Nonstarchy Vegetables	*Cauliflower*	2.7%	5.2%		
		Summer Squash	1.1%	4.2%	
			Romaine Lettuce	1.3%	3.5%
Sweet Fruits	*Banana*	1.1%	22.2%		
		Dried Date	2.2%	72.9%	
Subacid Fruits	*Apple*	.2%	14.1%		
		Peach	.6%	9.7%	
Acid Fruits	*Orange*	1.0%	12.2%		
		Pineapple	.3%	13.7%	

Composition and Facts About Foods, by Ford Heritage, lists the protein and carbohydrate content of most common foods. You need not become an expert on these fine points, unless that is your desire. The food classification and food combining charts in this lesson will be adequate to help you to become enough of an expert in the food combining system to enable you to plan properly combined meals, and to teach others to do the same.

5.3 Examples of Menus That Do Not Violate Food Combining Rules No. 1 and 2

1. No Carbohydrate with Acid
2. No Carbohydrate with Protein

Carbohydrate Menus (No Acid or Protein)

Bibb lettuce
Celery

Protein Menus (No Carbohydrates)

Romaine lettuce
Celery

Cucumber
Sweet potatoes (raw or cooked)
Water chestnuts

Tomatoes
Raw broccoli
Pecans

Romaine lettuce
Sweet pepper
Edible pod peas
Sweet corn (raw or steamed)

Boston lettuce
Sweet red pepper
Tomatoes
Kale (raw or steamed)
Sprouted sunflower seeds

Boston lettuce
Raw carrots
Brussels sprouts (raw or steamed)
Potatoes (steamed or baked)

Young, sweet cabbage
Cucumber
Alfalfa sprouts
Tomatoes
Cashews

Celery or cabbage
Raw turnips
Green beans (raw or steamed)
Raw yellow squash
Cooked rice

Ruby leaf lettuce
Celery
Raw zucchini squash
Soy bean sprouts

5.4 Examples of Menus That Violate Food Combining Rules No. 1 and 2

1. No Carbohydrate with Acid
2. No Carbohydrate with Protein

Boston lettuce
Sweet pepper
*Tomatoes
*Sweet potatoes

NO-NO! (Acid with starch)

Bibb lettuce
Celery
*Peaches
*Sweet corn
*Almonds

NO-NO! (Starch with protein, fruit with starch, fruit with protein)

Romaine lettuce Celery Broccoli *Oranges *Jerusalem artichoke	NO-NO! (Acid fruit with starch)
Cabbage Cucumber *Tomatoes *Lentil sprouts *Rice	NO-NO! (Two combination starch/protein foods; acid with combination foods)
Leaf lettuce Celery *Dates *Pecans	NO-NO! (Sweet fruit with Protein)
Cabbage Celery Alfalfa sprouts *Potatoes *Sunflower seeds	NO-NO! (Starch with protein)
Bibb lettuce Cucumber Sweet pepper *Millet *Cashews	NO-NO! (Protein with combination starch/protein food)
Ruby leaf lettuce Cabbage Yellow squash *Acorn squash	NO-NO! (Starch with combination protein/starch food)

*Soy beans

5.5 Protein-Protein Combinations

3. *Never consume two concentrated proteins at the same meal.*

Gastric acidity, and type, timing and strength of secretions for various proteins are not uniform. Therefore, do not combine nuts with cheese, nor any of the following concentrated protein foods with each other: nuts, avocado, soy beans, cheese, eggs, flesh foods.

Alfalfa sprouts, which are considered a green vegetable, may be used with a concentrated protein.

For optimal digestive efficiency, only one variety of nuts or seeds should be used at a sitting, but, if digestive problems are not a factor, it may be possible to eat two or three varieties together without harm. Some personal experimentation in this area is indicated. You may desire to combine one variety of seeds with one variety of nuts, or not to use high-fat nuts like brazils or macadamias by themselves. I have had good results in combining such high-fat nuts with lower-fat nuts or seeds. It might also be useful to combine expensive nuts like macadamias or pignolias with lower-priced nuts or seeds, in order to be able to afford the indulgence and variety of including the higher-priced nuts in the diet.

Some high-fat nuts are:

Macadamias	71.6% Fat
Brazils	66.9% Fat
Pecans	71.2% Fat

Some lower-fat nuts and seeds are:

Almonds	54.2% Fat
Pignolias	47.4% Fat
Sunflower seeds	47.3% Fat
Pumpkin seeds	45.8% Fat
Sesame seeds	52.2% Fat

Do not combine cashews with other nuts; the cashew is a part of the cashew apple and is not a true nut. It has a higher carbohydrate content than true nuts, having 29.3% carbohydrate and 17.2% protein. By contrast, for example, the almond has 19.5% carbohydrate and 18.6% protein.

Actually, the cashew is the pistil of the cashew apple. The whole raw cashew has within its shell a thick caustic liquid. In preparing cashews for marketing, they are "parched" to dissipate the acid, and then shelled. While not exactly "raw", they have not been subjected to the "roasting" (deep-frying) given "roasted nuts", and are considered good Hygienic food. They are combined in the same manner as nuts

and can be eaten with a salad.

Peanuts, of course, are not nuts. They are combination starch/protein foods, and are combined as starch.

If you experience any problems in learning to eat and digest nuts, it would be best to use only one variety at a sitting. Start out with small quantities, one to two ounces, and use only with salads. If you do have problems with nuts, experiment and find those you handle best and use mostly those. You will eventually build, up your nut-digesting ability and be able to use more varieties.

Most people have no problem with sunflower seeds. Those who do can begin by using them slightly sprouted. Just soak overnight, drain and let them progress until just a small sprout is showing. Complete sprouting instructions will be given in Lesson 26, Preparing and Serving Foods.

Although the pecan is a high-fat nut, it is easy to chew and seems to agree with most people. Cashews are also easy to chew and most people enjoy the sweet taste.

Almonds are valuable nuts, and have a somewhat alkaline reaction, whereas other nuts have the acid reaction commonly found in protein foods. However, they are hard and more difficult to masticate thoroughly. Problems may be avoided by thoroughly masticating and insalivating these nuts.

It does not seem necessary to give examples of menus which do or do not violate Food Combining Rule No. 3. It should suffice to repeat: eat but one protein food at a meal, and do not combine nuts, avocados, soy beans, cheese, eggs or flesh foods with each other.

5.6 Protein-Fat Combinations

4. *Do not consume fats with proteins.*

For the conventional eater, this means do not use cream, butter or oil with meat (any flesh foods), eggs, cheese or nuts. For the budding or experienced Hygienist, the fat foods are avocados and nuts. Of course, nuts are also a principal protein food. Avocados also contain small amounts of excellent protein. Since the Hygienic "fat" foods are really protein/fat foods, it would certainly be inadvisable to add more fat to the meal. You learned in Lesson 22 that fat has an inhibiting influence on digestion. We have also emphasized that we do not use two proteins at the same meal. So, it is obvious you would not use nuts and avocados at the same meal. This would also apply to cheese, if you use it—do not use cheese with avocados or nuts.

However, in implementing the "no protein-fat combination" rule, it must also be borne in mind that you should not use cream, butter or oils with protein foods, whether they are protein/fat foods (which most of them are) or whether they are among the few low-fat protein foods (legumes, skim milk cheese, lean meat).

5.7 Menus That Do Not Violate Food Combining Rule No. 4 No Fat with Protein

Boston lettuce Celery cabbage Cucumber Pecans	Sweet, young cabbage Cucumber Sweet pepper Alfalfa sprouts Cheese
Romaine lettuce	Kale

Cucumber Celery Tomato Avocado	Cucumber Celery Soy pecan sprouts

5.8 Menus That Violate Food Combining Rule No. 4

Cabbage Tomato Celery *Avocado *Pecans	NO-NO! (A fat/protein with a protein/fat)
Boston lettuce Celery cabbage Tomato *Cheese *Walnuts	NO-NO! (Two protein/fat foods)
Leaf lettuce Kale Cucumber Celery *Cooked soy beans with butter added	NO-NO! (Fat added to high protein combination food)
Romaine lettuce Sweet pepper Broccoli *Cheese *Avocado	NO-NO!(A protein/fat food with a fat/protein)

5.9 Fats in Combination with Other Foods

5. *Use fats sparingly.*

Too much fat taken with a meal results in discomfort and digestive problems. The best way to use fats, in moderation, is with raw green vegetables. If fats are used with other foods, adding raw green leafy vegetables to the meal will help to counteract the inhibiting effect of fats on gastric secretion.

In Lesson 22, it was pointed out that the use of avocados (low protein/fat) with starch is considered fair, provided a green salad is included with the meal. Nuts (high protein/fat) are not used with starch. The best way to use avocados or nuts is with the salad meal.

We also concluded that, while the use of avocados with subacid or acid fruit is ordinarily considered only a fair combination, it has been found that including salad vegetables, especially lettuce and celery, in the avocado/fruit meal enhances its digestion, and it becomes a quite acceptable combination.

5.10 Menus, That Do Not Violate Food Combining Rule No. 5 Fats with Other Foods

Bibb lettuce	Leaf lettuce
Celery cabbage	Celery
Cucumber	Cucumber
Tomato	Potato (steamed or baked)
Avocado	Avocado

Romaine lettuce	Peaches
Celery	Apples
Sweet pepper	Lettuce
Alfalfa sprouts	Celery
Avocado	Avocado

In the above menus we are using avocado only as an example of the correct combining of fat. We are not using nuts (high protein/fat) as examples of fat with other foods, because when we combine nuts with other foods, their protein content is our primary concern. As for other fats (butter, oil, etc.), they do not really belong in a list of Hygienically correct menus.

5.11 Menus That Violate Food Combining Rule No. 5 Fats with Other Foods

Cucumber Green beans *Steamed potato with butter *Avocado	NO-NO! (Two foods high in fat)
Bananas *Dates *Avocado	NO-NO! (A fat/protein with dried sweet fruit—this would be somewhat better if lettuce and/or celery were included.)
Carrots	NO-NO! (Two foods high in fat)

Buttered cooked sweet
corn
Avocado

Salad with oil dressing
Rice NO-NO! (Two foods high in fat)
Avocado

5.12 Acid-Protein Combinations

6. Do not eat acid fruits with proteins.

There is some variation in practice as to the use of citrus or other acid fruit with nuts. Dr. Vetrano has discontinued this practice, but it is still used by other Hygienic professionals and lay people. Those with digestive problems should certainly avoid this combination. The student should carefully re-read the text of Food Combining Rule No. 6 (in Lesson 22) for an understanding of this subject.

Those with unimpaired digestions can probably decide on an individual basis whether they should experiment with this combination. The choices would be (a) no citrus with nuts, (b) eat citrus, wait one-half hour to one hour before eating the nuts, and (c) eat the citrus and nuts together. The best practice is (a), because it is not good Hygienic practice to eat a meal in "relays."

If you do use citrus and nuts at the same meal, it would be a good idea to include some lettuce and/or celery.

The same reasoning would also apply to other acid fruits, such as pineapple, strawberries, tart apples, etc. The less sugar they contain, the less objection there is to combining them with nuts.

The same reasoning would apply to the use of citrus or other acid fruits with other protein foods, such as avocado or cheese.

People who use eggs or flesh foods should avoid the use of any fruit at the same meal. The use of these foods causes enough problems without also adding the extra problems of combining the fruit acids and sugars with the flesh foods.

Sour salad dressings and acid fruit drinks are bad with any meal, but are particularly bad with protein meals because they check hydrochloric acid secretion.

5.13 Menus Illustrating Food Combining Rule No. 6 Acid Fruits with Proteins

Good Combinations

Lettuce
Celery
Tomato
Brazil nuts (or other nuts, or avocado, or cheese, if you use it)

Fair Combinations

Lettuce
Kiwi fruit
Almonds

Lettuce
Grapefruit
Avocado

Somewhat tart oranges, pineapple, strawberries or apples, combined with nuts, avocado or cheese would also be fair combinations.

Bad Combinations

Very sweet oranges, pineapple, strawberries or other fruit, combined with nuts, avocado or cheese would be bad combinations (too much sugar with protein).

5.14 Sugar with Starch, Protein, Acid Fruit

7. *Do not combine sweet fruits with foods that require a long digestion time—such as proteins, starches and acid fruit.*

Sugar with protein, starch or acid leads to fermentation, a sour stomach and discomfort. When protein or starch foods are combined with sugars, they may remain in the stomach almost twice as long as is normal. Use sweet fruits only as indicated in Food Combining Rule No. 10.

The same principle applies to the use of any sugar, honey, molasses or syrup, which are especially prone to ferment if used with mixed meals. Of course, these types of sugars should not be used at all—with anything. Refined sugar robs the body of B-vitamins and throws a "monkey-wrench" into the digestive machinery. The other "sweeteners" are almost as bad. A future lesson will discuss in detail the harmfulness of sweeteners.

5.15 Menus That Do Not Violate Food Combining Rule No. 7

Sweet Fruits with Foods Requiring a Long Digestion Time

Lettuce Grapes Bananas	Lettuce Sweet mangos Persimmons
Celery Cherries Delicious apples Dates	Celery Lettuce Pears Peaches Raisins

5.16 Menus That Violate Food Combining Rule No. 7

Sweet Fruits with Foods Requiring a Long Digestion Time

Jonathan apples Strawberries Bananas	NO-NO! (Acid fruit with sweet fruit)
Plums Oranges Dates	NO-NO! (Acid fruit with sweet dried fruit)
Sweet corn Persimmons Figs	NO-NO! (Starch with sweet fruit)
Apples Raisins Pecans	NO-NO! (Protein with sweet fruit) (Many people have said they like to eat this combination, but it should be avoided, as it is quite incompatible.)

5.17 Starch-Starch Combinations

8. *Eat but one concentrated starch at a meal.*

This rule may be important principally as a means of avoiding overeating of starches, but it is a good rule to follow. Never combine a concentrated starch with a combination food (starch/protein food) such as grains or legumes. Never combine two combination foods at the same meal (such as rice with beans).

Slightly starchy foods may be combined with concentrated starches but not with combination foods. Potatoes with carrots, green beans and a large green salad is a good combination (if you are using cooked food). Brown rice would be better combined with broccoli, yellow squash and a salad.

Two mildly starchy vegetables may be combined if no concentrated starch is used, e.g., globe artichokes and carrots, or beets and edible pod peas.

5.18 Menus That Do Not Violate Food Combining Rule No. 8 One Concentrated Starch at a Meal

Ruby lettuce	Celery cabbage
Carrots	Cucumber
Celery	Edible pod peas
Raw Broccoli	

Globe artichoke	Sweet corn (raw or cooked)

Cabbage	Bibb lettuce
Sweet pepper	Celery
Cucumber	Cauliflower (raw or cooked)
Green beans (raw or cooked)	Yams (raw or cooked)
Potatoes	

Romaine lettuce	Boston lettuce
Celery	Cucumber
Sweet pepper	Water chestnuts
Cauliflower (raw or cooked)	Parsnips
Butternut squash	

5.19 Menus That Violate Food Combining Rule Nr. 8 One Concentrated Starch at a Meal

Bibb lettuce Sweet pepper Kale *Sweet corn *Potatoes	NO-NO! (Too much starch—unless corn is young, green and freshly picked)

Celery cabbage Cucumber *Cauliflower *Acorn squash * Jerusalem artichokes	NO-NO! (Too much starch)

Leaf lettuce Celery Broccoli *Sweet potatoes *Rice	NO-NO! (Starch with combination starch/protein food)

Cabbage Celery Cucumber Zucchini squash1 *Potatoes *Chestnuts	NO-NO! (Starch with combination starch/protein food)

5.20 Acid Fruits, Subacid Fruits, Sweet Fruits

9. *Acid fruits may be used with the less sweet subacid fruits.*

Tomatoes should not be used with subacid fruits. The acid fruits are those with the tart flavors (see Food Classification Chart in this lesson). The less sweet subacid fruits are some grapes (those which are neither sweet nor sour), some varieties of apples, most mangos, and any fruit on the subacid list which is not really sweet.

5.21 Menus Illustrating Food Combining Rule No. 9

Good Combinations

Lettuce
Oranges
Apples

Celery
Pineapple
Peaches (if not sweet)

Lettuce
Strawberries
Plums (if not sweet)

Bad Combinations

Tomatoes Bananas	NO-NO! Acid with sweet fruit
Grapefruit Sweet cherries	NO-NO! Acid with sweet fruit
Oranges Delicious apples	NO-NO! Acid with sweet fruit

5.21 Acid Fruits, Subacid Fruits, Sweet Fruits

10.*The sweeter subacid fruits may be used with sweet fruits.*

The sweeter subacid fruits are any fruits on the subacid list that have a marked sweet taste. See Food Classification Chart for a list of the sweet fruits. Dried sweet fruits should be used sparingly—one kind at a meal—and in small quantities.

5.22 Menus Illustrating Food Combining Rule No. 10

Good Combinations

Lettuce Delicious apples Bananas	Lettuce Pears Persimmons
Celery Sweet grapes Dates	Celery Papayas Figs

Bad Combinations

Tart apples Bananas	NO-NO! (Acid with sweet fruit)
Tart mangos Dates	NO-NO! (Acid with sweet fruit)
Tart grapes Persimmons	NO-NO! (Acid with sweet fruit)
Tart peaches Figs	NO-NO! (Acid with sweet fruit)

5.23 Fruits with Vegetables

11.*Do not combine fruit with any vegetables other than lettuce and/or celery.*

Lettuce and celery combine well with all types of fruit except melon. It is best to use two to four

varieties of fruit at a fruit meal, plus lettuce and/or celery. These green leafy vegetables may even enhance digestion of the fruit.

Menus Illustrating Food Combining Rule No. 11

Good Combinations

Lettuce
Celery
Sweet grapes
Pears
Bananas

Lettuce
Sweet apples
Sweet cherries
Fresh figs

Celery
Papayas
Sweet peaches
Persimmons

Bad Combinations

Broccoli Yellow squash Apples Dates	NO-NO! (Fruits with vegetables other than lettuce and celery)
Lettuce Pears Sweet corn Bananas	NO-NO! (Fruits with vegetables other than lettuce and celery)
Lettuce Blueberries Green beans Potatoes	NO-NO! (Fruits with vegetables other than lettuce and celery)

5.24 Fruits with Vegetables

12.*Salads combine very well with either proteins or starches.*

Green leafy vegetables combine well with most other foods. They are excellent food and should be used in abundance. Do not combine any vegetables with melon.

A large daily salad is an excellent part of your food program. The dark green leafy vegetables are the best for salad—Romaine, Boston, leaf or Bibb lettuce, green celery—to which may be added cucumbers, sweet peppers, raw broccoli, raw turnips or raw cauliflower. Raw carrots may be added if u is a starch meal; tomatoes may be added if no starch or combination foods are included in the meal.

5.25 Menus Illustrating Food Combining Rule No. 12

Good Combinations

Lettuce
Celery cabbage
Cucumber
Tomatoes
Nuts

Lettuce
Celery
Sweet pepper
Raw broccoli
Avocado

Lettuce and/or celery with any fruit

Bad Combinations

Lettuce Celery Watermelon	NO-NO! (Do not combine salad vegetables with melon)

Tomatoes Celery cabbage Honeydew melon	NO-NO! (Do not combine salad vegetables with melon)

5.26 Melons

13. *Do not consume melons with other foods.*

They do not combine well with any food, except, perhaps, with certain fruits. Those with unimpaired digestions may wish to experiment with the use of grapes or other subacid fruits with melon. It is really best to take melon alone, especially watermelon. Melon decomposes much more quickly than other fruits and, if held up in the stomach awaiting the digestion of other foods, will decompose and cause gastric distress.

Never eat watermelon with nuts. There are a number of different kinds of melon, and it is better to eat your fill of one kind as one meal.

I am not giving any examples of melon with subacid fruits. 1 do not really recommend using melon with any other foods, since 1 believe this is a good rule for most people. Those who wish to experiment

with the use of melons with subacid fruits should do so very carefully, testing one subacid fruit (in small amounts) at a time. (See Dr. Vetrano's comments on this subject.)

5.27 Sprouts

14.*Alfalfa sprouts may be combined as a green vegetable.*

Other sprouts should be classified somewhat in the same category as the original seed, even though the protein and carbohydrates are less concentrated. (Review the discussion of sprouts in Lesson 22.)

Classification of Sprouts for Purpose of Food Combining

Alfalfa seeds, sprouted	Green vegetable
Mung beans, sprouted	Green vegetable protein/starch (combine as starch)
Grains, sprouted, sprouted	Mildly starchy combination foods
Sunflower seeds	Protein
Soy beans, sprouted	Protein
Lentils, sprouted	Protein

5.28 Menus Illustrating Food Combining Rule No. 14

Good Combinations

Tomato
Lettuce
Alfalfa sprouts
Nuts

Celery
Cucumber
Avocado
Mung bean sprouts

Cabbage
Sweet pepper
Broccoli
Sprouted soy beans

Lettuce
Celery
Cauliflower
Green beans
Sprouted wheat

Bad Combinations

Lettuce
Cucumber

NO-NO! (Protein with combination food)

Sprouted mung beans* Nuts*	
Celery Sweet Pepper Sprouted rye* Nuts*	NO-NO! (Protein with combination food)
Cabbage Celery Sprouted sunflower seeds* Potatoes*	NO-NO! (Protein with starch)
Lettuce Tomatoes* Lentils, sprouted* Rice*	NO-NO! (Acid and protein with combination food)

5.29 Milk, Clabber and Yogurt (Not Recommended)

15. *Milk is best taken alone.*

This rule is included because it is one of Dr. Shelton's food combining rules, and because this lesson may be helpful to those still on a mixed diet. Please review the text in Lesson 22 on Food Combining Rule No. 15. I hope you will decide not to use milk, clabber or yogurt.

I am not including menus for the best ways to combine these foods, but will simply say they are best used alone, but are a fair combination with acid or subacid fruit.

5.30 Good, Fair, Poor and Bad Combinations

- Good combinations are good for the weakest digestion.
- Fair combinations are permissible for those with unimpaired digestions.
- Poor combinations should only be used by people with the best digestions, and then rarely (or they may lose their distinction of possessing the "best" digestions).
- Bad combinations are so bad that no one should ever use them.

5.31 Examples

Good combinations

Golden Delicious apples	Lettuce
Thompson seedless grapes	Cucumber
Lettuce and celery	Sweet peppers
Bananas	Alfalfa sprouts
	Nuts

Fair Combinations

Jonathan apples	Lettuce
Pears	Cabbage
Lettuce	Green beans
Avocado	Potatoes
(Avocado with fruit)	Avocado
	(Avocado with starch)

Poor Combinations

Cherries	
Lettuce	Celery cabbage
Avocado	Cucumber
Soaked dried apricots	Mung bean sprouts
(Avocado with dried sweet fruit—the fact that it has been soaked and that lettuce is included with the meal improves it somewhat.)	Nuts (It would be better to use alfalfa sprouts with nuts.)

Bad Combinations

Grapes	Lettuce
Avocado	Celery
Bananas	Cabbage
Dates	Rice
(Concentrated fat with too much concentrated sugar.)	Potatoes (Starch with combination starch/protein food)

5.32 Discrepancies

You may detect discrepancies if you compare the different food charts and classifications of foods as interpreted by various authors and professionals. For instance, you may see butternut or acorn squash listed by one author as starchy, and mildly starchy by another author.

If you are really concerned about it, you can refer to *Composition and Facts About Foods*, by Ford Heritage, or *Composition of Foods*, Department of Agriculture Handbook No. 8. You can then make your own decision.

Sweet potatoes with 26.3% carbohydrates, yams with 23.2% carbohydrates and potatoes with 17.1% carbohydrates are all considered starchy foods. Carrots with 9.7% carbohydrates and beets with 9.9% carbohydrates are considered mildly starchy. Winter squash (butternut, acorn, etc.) has 12.5% carbohydrates. Would you classify it with the 17.1% potatoes or the 9.9% beets? It's not too important, since starches may be used together, if desired, provided the total quantity of starch at the meal does not exceed, say, 15% of the meal.

Cauliflower, with only 5.2% carbohydrates, is listed by some as mildly starchy, yet its carbohydrate content is less than that of broccoli or brussels sprouts.

Another case in point is the coconut. Dr. Esser classified it as protein, but Dr. Shelton combines it as starch. It is actually a combination food, and is usually combined as a starch. But when we look it up in the food charts, we find that fresh coconut contains 9.4% carbohydrate and 3.5% protein; dried coconut contains 23% carbohydrate and 7.2% protein.

By comparison, almonds contain 19.5% carbohydrate and 18.6% protein; pecans 14.6% carbohydrate and 9.2% protein; these, of course, are classified as protein foods.

Brown rice contains 77.4% carbohydrate, 9.6% protein; fresh lima beans contain 22.1% carbohydrate and 8.4% protein; these are combination foods, and are combined as starch.

It seems to me that the coconut, with three times as much starch as protein, should be combined as starch. But, since fresh coconut only has 9.4% carbohydrate, perhaps the idea that its starch content is unimportant is a valid one. What do you think? My own method is to think of it as a combination food, and I don't use tomatoes or other acid fruits with coconut—it seems the safest interpretation.

If you see other such discrepancies, you may either disregard them and use the food either way, or, if you are uncomfortable about it, get a reference book and look it up. It can be a great satisfaction to resolve such discrepancies in your own mind by tracking down the correct information.

You may also occasionally come across an error in food combining charts; for example, on page 321 of *The Hygienic System, Volume II*, in one place starch is said to be a bad combination with subacid fruit and in another place on the chart, it is said to be a fair combination. I would say that the use of any fruit with starch would be contraindicated.

The food combining charts in this lesson are as accurate as I could make them, and I hope they will be helpful to you and your students.

6. Trying Too Hard

6.1 Take It Easy!

Don't try so hard that you become nervous and anxious. Do the best you can. Avoid the worst combinations (dates or bananas with nuts, potatoes or grains with tomatoes, or grain with nuts) and everything else will gradually fall into place.

Occasional indulgence in incorrect food combinations is no cause for anxiety, even though it is not ideal—a healthy body can cope with occasional exceptions. It is what we do daily, habitually, that will

make the difference.

Don't make food the focal point of your life. Above all, the student should not become overly preoccupied with food. Eat your meal and forget it. Let your friends eat their foods and don't give them a lecture at the dining table. You may have to parry their questions about your eating habits by explaining that you don't like to enter into these discussions at mealtime, but will be happy to answer their questions afterwards.

7. Your Social Life

If you take a moderate attitude, the enjoyment of dining out, entertaining or eating at a friend's home need not be eliminated from your life. Sometimes, with good planning, little or no compromise will be necessary.

Do your best at home, and partake, somewhat selectively, when with your friends. Even if you decide to "go all the way" in Natural Hygiene for optimal health, and never make exceptions at home, it is not necessary to act superior and critical when in company. You can partake enough not to be too conspicuous without really hurting yourself. Just be alert not to carry your indulgences too far, or to loose sight of your goal. You might even find that your friends respect you and are interested in your desire to cooperate with the needs of your body.

8. Your Family

As for your family, their participation in proper food and good food combining is up to them. You can make better food available, but don't try to force them to eat anything or to eat in a particular way. They may gradually want to follow your example, or they may never do so. It's not all that hard to provide simultaneously for your needs and theirs. It's certainly worth the effort if it's going to improve your health.

9. Looking Forward

As you progress in Natural Hygiene, your understanding and application of Hygienic principles will become increasingly synchronized, and you will find it easier today than yesterday, and easier

tomorrow than today!

10. Food Classification Charts

10.1 Proteins

Nuts

Pecans
Almonds
Brazil nuts
Filberts or hazelnuts
English walnuts, butternuts, heart nuts
Black walnuts
Macadamias
Pistachios
Pignolias (Pine nuts)
Indian nuts
Beechnuts
Hickory nuts
Cashews

Other Plant Proteins

Soy beans (fresh, dry or sprouted)
Sunflower seed sprouts
Lentil sprouts
Garbanzo sprouts

Low Protein

Avocados (may also be classified as a fat and as a neutral fruit)
Olives
Milk (not recommended)

Green Vegetable Proteins (Combine as Starch)**

Peas in the pod
Lima and other beans in the pod
Mature green beans in the pod
Mung bean sprouts*

* Mung beans sprouted to green leaf stage—green vegetable starch/protein
** Classified as starches for purposes of food combining

Seeds

Sunflower seeds
Sesame seeds
Pumpkin and squash seeds

Animal proteins (not recommended)

Cheese (raw milk or unprocessed)
Eggs
All flesh foods except fat

Starchy proteins * * (not recommended)
(Combine as starch)

Beans:
Peas
Lentils
Peanuts
Chestnuts

All grains:
Wild rice
Rice
Buckwheat
Millet
Wheat
Rye
Barley

Sprouts (contain significant amounts of protein, especially in early stages)

Soy sprouts (Combine as protein)
Lentil sprouts (Combine as protein)
Sunflower seed sprouts (Combine as protein)
Alfalfa sprouts (may be combined as green vegetable)
Mung bean sprouts*
All seed, bean & grain sprouts
Combine seed & bean sprouts as protein —except alfalfa
Combine grain sprouts as mildly starchy

* Mung beans sprouted to green leaf stage—green vegetable starch/protein

10.2 Starches

Starchy proteins (Classified as starches for purposes of food combining)

Peanuts
Chestnuts
Coconuts
Dry beans

Dry peas
Lentils
Peas in the pod
Lima & other beans in the pod
Mature green beans in the pod

All grains and all foods containing grains:
Wild rice
Brown rice
Buckwheat groats
Millet
Oats
Wheat
Rye
Barley

Starchy vegetables

White potatoes
Yams and sweet potatoes
Mature corn
Jerusalem artichokes
Parsnips*
Salsify (Oyster plant)*

Mildly starchy vegetables

Carrots
Globe artichokes
Beets
Rutabaga
Edible pod peas
Winter squash (acorn, butternut, hubbard, banana, etc.)*
Pumpkin*
Water chestnuts
Sprouted grains

* Parsnips (17.5% starch) and salsify (18%) are sometimes listed as mildly starchy or even nonstarchy vegetables, but since they contain as much starch as the potato (17.1%) they should properly be classified as starchy.

Winter squash (12.4%) and pumpkin (6.5%) are shown on some charts as starchy, but their starch content is quite a bit lower than potatoes (17.1%). 1 would consider them mildly starchy (or you could consider winter squash as borderline).

* Cauliflower is sometimes listed as mildly starchy, but with a starch content (5.2%) lower than broccoli (5.9%) and Brussels sprouts (8.3%), it properly belongs in the nonstarchy category.

10.3 Nonstarchy and green vegetables

Lettuce
Celery

Cabbage (young, sweet)
Celery cabbage
Cucumber
Cauliflower* (see * above)
Escarole (if not bitter)
Sweet pepper
Broccoli
Rappini (similar to broccoli)
Brussels sprouts
Kale
Collard greens
Dandelion greens
Turnip tops
Mustard greens (if young and mild)
Okra
Kohlrabi
Turnips
Eggplant
Green corn (if not mature, and if eaten less than 2 hours after picking)
Green beans (young & tender)
Zucchini (and all other summer squash)
Yellow crookneck squash (and all other summer squash)
Chayote
Bok choy
Alfalfa sprouts

Use seldom if at all— too high in oxalic acid (a calcium antagonist)

Spinach
Swiss chard
Beet tops
Rhubarb

Should not be used— contain concentrated acids & irritants

Bitter cabbage
Endive
Escarole

Contain mustard oil

Irritant foods (unless very young and sweet)— should not be used often or in large quantities

Parsley
Watercress
Chives
Scallions
Onions
Leeks
Radishes

Garlic
Mature mustard greens

10.4 Fats

Fats delay digestion—may take up to four to six hours. The need for fat is small, and the best sources are whole foods like nuts and avocados.

Recommended fats

Edible (protein/fat foods) seeds, nuts and avocados

These fats are not recommended

Not recommended, though used occasionally by some Hygienists.

Butter
Cream

All oils

(Oils are used occasionally by some Hygienists, but are not recommended. Use unrefined cold-pressed oils, preferably stable oils like olive and sesame oil, less likely to be rancid. Oils are fragmented, concentrated foods, and are best omitted)

Olive oil
Sesame oil
Sunflower seed oil
Corn oil
Peanut oil
Cottonseed oil
Safflower oil

All meat fats (not recommended)

Butter substitutes (not recommended)—oleomargarine and the hard white hydrogenated "vegetable" shortenings commonly used in frying and baking are particularly pernicious substances, which the body is not equipped to handle.

10.5 Sweet fruits

Fresh:
Bananas
Persimmons
Thompson grapes (seedless)
Muscat grapes
All sweet grapes
Fresh figs

Dry:
Dates
Figs

Raisins
Prunes
Apricots
Peaches
Apples
Cherries
Bananas
Litchi "nuts"
Carob
All dried fruit

Some unusual or tropical fruits not listed— sweet taste is a good indication of its classification.

10.6 Subacid fruits

Sweet apples (Delicious)
Sweet peaches
Sweet nectarines
Pears
Sweet cherries
Papayas
Mangos
Apricots
Fresh Litchi "nuts"
Sweet plums
Blueberries
Raspberries
Blackberries
Mulberries
Huckleberries
Cherimoyas
Some grapes (neither sweet nor sour)

Some unusual or tropical fruits not listed.

10.7 Acid fruits

Oranges
Grapefruit
Pineapples
Strawberries
Pomegranates
Lemons
Kiwi fruit
Kumquats
Loquats
Carambolas
Loganberries
Gooseberries
Cranberries (not recommended—they contain benzoic acid)

Limes Sour apples Sour grapes Sour peaches Sour nectarines Sour plums Sour cherries

Tomatoes—acid fruit, without the sugar content of other acid fruits. Used with vegetable salad or any green or nonstarchy vegetables, but not at a starch meal. May be used with nuts or cheese, but not with meat, milk or eggs. Some unusual or tropical fruits are not listed—acid (or sour) taste is a good indication of its classification.

10.8 Melons

Watermelon
Honeydew melon
Honey balls
Cantaloupe
Muskmelon
Casaba melon
Crenshaw melon
Pie melon
Banana melon
Persian melon
Christmas melon
Nutmeg melon

10.9 Syrups and sugars

Brown sugar
"Raw" sugar
White sugar
Milk sugar
Maplesyrup
Cane syrup
Corn syrup
Honey

None of these substances are recommended.

11. Questions & Answers

How many mildly starchy vegetables may be used with a concentrated starch?

> Preferably only one, e.g., potatoes and carrots. However, if no concentrated starch is used at the meal, two (or perhaps even three) mildly starchy vegetables might be used together, e.g., globe artichokes, carrots and water chestnuts, together with a large green salad.

What percentage of a meal should be of concentrated proteins or starches?

> A small percentage, say 10 or 15%.

If I want to eat home-made bread, cake or pie occasionally, how should they be combined?

Cake or pie is such a conglomeration of ingredients, there is no way to properly combine them.

I have an 85-year-old mother who lives with me. How far should I go in trying to convince her to accept the Hygienic food program and food combining?

You can't (and shouldn't try to) force anyone at any age to eat your way. You should not nag elderly people to change their ways. If she is receptive to gentle persuasion, that is fine, but arguing about what foods she should eat may do more harm than good.

Why is it that conventional foods stay with me longer, and what can I do to feel more satisfied for a longer period of time between meals, so I can resist snacking?

First of all, to have foods "stay with you" is undesirable. When you eat a conglomeration of foods that are diffficult to digest, you have given your body a lot of work to do to try to get rid of the mess. No wonder you don't feel like eating again for a long time! Food mixtures that take many hours to digest are apt to ferment and cause problems When I first changed to a properly combined Hygienic diet, I noticed the "empty" feeling at certain times, but I soon came to realize that it was a good feeling to know that gastric digestion has been efficiently accomplished, and that the stomach would now have chance to relax and rest before it would have to deal with the next meal. The "empty" feeling doesn't necessarily signal the need for food.

Of course, it is unusual to feel "empty" very soon after a protein meal. My digestion has improved so much that I am delighted when my stomach feels empty 3 1/2 or 4 hours after eating nuts and a raw salad. In my earlier years of Hygienic eating, it took five or six hours or longer to achieve that happy state of "emptiness."

It is true that for those who feel more satisfaction and less desire for unwholesome foods after a meal that takes longer to digest, it might be advisable to have a protein meal at noon instead of in the evening. A properly combined protein meal will not cause the complicated problems common in digesting conventional meals, but it does remain in the stomach and intestines much longer than fruit or starch meals, thus giving people a satisfied feeling and preventing them from snacking on junk foods or sugars between meals.

In recent years, Dr. Vetrano served the protein/fat meal (nuts) at noon at the Health School. (See article, "Protein Meal at Noon," by Dr. Virginia Vetrano, in this lesson.) I personally prefer to defer eating foods which require long digestion time (proteins or combination foods or starches) until the evening meal. During the day, when I am most active, I don't like to have a "full" feeling. In fact, when I am scheduled to give an afternoon lecture, I usually don't eat at all until after the lecture. Sometimes I might eat the orange or a small piece of melon a couple of hours before the lecture. When I am scheduled for an evening lecture, I might eat a light fruit meal a couple of hours beforehand.

When I eat a meal which includes protein or a combination food or starch (following a large salad, of course), I prefer to be able to relax and rest afterwards, if at all possible. I find this works best for me.

I do make some occasional exceptions to this rule, depending on my program for the day. If I am going to be away from home in the evening and unable to have my leisurely evening meal, I might eat a protein meal before leaving home, as my noon meal. Sometimes I simply take a bag of salad and some nuts with me.

Your Probing Mind By Dr. Virginia Vetrano

"Mono-Eliminating Diet"

What are your feelings about a "mono-eliminating diet, " e.g. oranges or grapefruit?

An "eliminating diet," mono or otherwise, is useful when for some reason a genuine fast cannot be taken. Bear in mind that the fast is always more efficacious and more rapid in permitting the body to rid itself of toxic wastes than any kind of eliminating diet. One week of a complete fast is probably more beneficial than two or three weeks of an "eliminating diet."

It is often thought that one can do the "eliminating diet" on his own, bypassing the service of a *Hygienic* doctor. While I am not trying to make people more dependent upon doctors for everything, I am trying to stress the fact that most people have insufficient knowledge of their condition and the "elimination diet," and often damage themselves by the improper application of *Hygiene*. Many people come to me after having placed themselves on an "eliminating diet" and carrying it out for too long. Many people tend to vascillate back and forth from one type of "eliminating diet" to another; and from stuffing to underfeeding so long that real deficiencies are produced and health is not regained. They do themselves much harm and come to me suffering with the same problems for which they started the diet, as well as suffering with deficiencies. The pathetic thing is now they are too thin to fast for speedy recovery of their health and too sick to eat. What do you do with them? They've gotten themselves in real trouble and have actually made themselves sicker and unable to be helped by the Hygienic doctor until they carry out his or her instructions in Hygienic living and have eaten properly for a year or more.

Juice diets, and the orange or grapefruit diet may be used judiciously with beneficial results, but these should not be carried out for months at a time, nor should a person go three or four days out of every week on a juice diet over a long period of time. He will become weak, and run into deficiencies.

Protein Foods

Is it true that the food I eat today is not digested, assimilated and put to use until several hours later? Why then does eating nuts early in the day give me a protein kick and in general help me to feel more

satisfaction and less desire for unwholesome foods?

Eating protein foods, especially nuts, satisfies for many physiological reasons. One of them is probably because of their high fat content. Fat seems to be used for energy longer than carbohydrates before being stored by the body. Sugars and starches are absorbed and gotten out of the small intestine and circulation quickly, and then rapidly converted into glycogen in the liver. Perhaps, with nothing in the intestines to be absorbed, hunger is again manifested. Proteins take quite a bit longer for digestion and absorption, and perhaps this is another reason why they satisfy more. Once they have been absorbed through the digestive epithelium, however; the amino acids are readily taken up by the cells. In spite of this, they still satisfy and prevent people from desiring junk foods or sugars between meals. This is one of the main reasons that we began serving the protein meal at noon instead of in the evening at the Health School.

Sequence of Eating

In what order should you eat foods?

Formerly it was thought by a few Hygienists that it was necessary to eat the least concentrated food first and the most concentrated food last. The reason for this was that the foods were supposedly layered in the stomach, and it was thought best not to mix them; to permit the juicier foods to be evacuated from the stomach first. It has been shown, however, that food does not stay in layers in the stomach, and the pyloric valve does not open with each peristaltic wave so that food will become mixed in the stomach even if you eat the most concentrated food last. For instance, let us say that you eat some subacid fruit first. The pyloric valve stays tightly shut for fifteen minutes after the beginning of a meal, then it begins to open and pass a tiny bit of food to the duodenum. Each time there is a contraction of the stomach, the food is pushed forward toward the pylorus (the lower end of the stomach). As the valve opens only occasionally and not each time the peristaltic wave pushes food toward it, the food is pushed toward a closed valve. The food cannot get out of the stomach at the valve, so it streams back toward the upper end of the stomach, thoroughly mixing with the food eaten last. Even if some food empties from the pylorus when it opens, only a small amount is evacuated and the rest is propelled backward to be thoroughly mixed with the contents of the upper stomach. Eat your foods in proper combinations, and you won't have to worry about the sequence in which you eat them. Food becomes mixed in the stomach regardless of sequence of eating.

It is wise, however, to remember to chew your foods well, and separately. That is, do not use a tomato or lettuce to moisturize nuts to help get them down. Chew your nuts well, and alone; swallow them. Between mouthfuls of nuts you may eat some salad foods. Never use the moisture of the less concentrated foods to help liquify nuts or other concentrated foods. The salivary glands will secrete sufficient moisture of the proper kind for this purpose and your foods will be better digested.

Sometimes it is wise to eat the least sweet fruit first when eating three fruits at one meal, otherwise the last part of the meal may be less tasty. If you eat dates first, for instance, and then take apricots, which are less sweet, you may not enjoy them as well after the very sweet fruit because of the unavoidable comparison of sweets.

Melons

Why do you eat melons alone?

Melons are best taken alone because the sugar and other nutriments are in a less stable form than the nutrients of other fruits. Orange juice may be kept in the refrigerator for an hour with little change in flavor, but if you refrigerate watermelon juice for only 10 minutes, its flavor, color and composition change. It decomposes much more quickly than other fruits. Consequently, if it is held in the stomach awaiting the digestion of other foods, it will decompose (ferment) and cause a great deal of gastric distress. Eating watermelon with nuts can really be troublesome.

One should not take watermelon with other more concentrated fruits. The more concentrated the food is, the longer it takes to propel it from the stomach, and if the melon is held in the stomach mixed with the other fruit, then it also will be held in the stomach for a longer period of time. Watermelon must be evacuated from the stomach as rapidly as it would be if eaten alone. If eaten with foods that slow its evacuation time from the stomach then it will ferment in the stomach and cause trouble.

Can you eat watermelon seeds?

Watermelon seeds can be saved and eaten if desired. There is some nutrient inside the hard shell, but the shell itself is composed of indigestible cellulose, and I do not think it wise to consume so much cellulose. In wild nature, animals would not normally try to chew something so hard and indigestible. Primates eat the fruits and spit out the hard seeds. Man, unfortunately, has the ability to analyze foods, consequently he discovered nutrients in the seed, so he tries to eat the seed, forgetting that most of the watermelon seed is indigestible, and may serve only to irritate the lining of the gastrointestinal tract. Many seeds of fruits are poisonous; they contain benzaldehyde and cyanide.

Nuts with Acid Fruits

Why is innpt advisable to take nuts with acid fruits?

We no longer serve nuts with acid or subacid fruit mainly because of the sugar content in the fruit. When fruit is held in the stomach awaiting the digestion of nuts, it has a tendency to ferment, and cause digestive troubles. The sugar content of organically grown citrus fruit is very high, and high concentrations of sugar inhibit gasiric secretion thus also interfering with protein digestion. It was formerly thought that the citrus didn't interfere with protein digestion but with greater study, observation and reflection, thoughts have changed.

Acid fruit such as tomatoes and grapefruit may not be deleterious, because of their diminished sugar content. Even if one eats the citrus thirty minutes prior to taking nuts, in most cases, there will still be a great deal of fruit in the stomach. The pyloric sphincter stays tightly shut for approximately 15 minutes after a meal begins. After fifteen minutes, the stomach begins gradually to evacuate, and then not rapidly. The food gets mixed in the stomach. If you desire nuts in the morning for breakfast, then it would be best to take them at least one hour after finishing your citrus or other fruit.

Beverages

What kind of beverage do you suggest besides water?

> Many years ago Dr. Shelton pointed out that water is the only drink. All other substances are either food or poison. If you are thirsty, you should drink pure water. If you are hungry, you should eat. If you are thirsty it doesn't mean you must eat a piece of watermelon, unless you are hungry at the same time. Drink only when thirsty and eat only when hungry. Poisonous soft drinks, coffee, tea, and other unnourishing beverages, and other poisonous fluids should never be used to quench a thirst. Pure water is best.

Dried Fruits

Are there any subacid dried fruits?

> The sugar concentration is naturally greater in fruits which have been dried. Some fruits that are considered subacid are considered as sweet fruits, after drying, unless they are soaked to replenish the missing water.

Article #2: Proteins In Your Diet! By Dr. Alec Burton

This short thesis on proteins is intended to clarify some of the confusing issues at present dominating the so-called science of nutrition, and especially to present to hygienists a rational view of the importance of protein and its indispensability to normal health and well being.

It has been of considerable interest to me to study the various diets offered by the numerous food reformers over the past two decades. Many of these diets have had nothing more than enthusiasm to support them and several have been completely impractical. One of my chief aims is to present a program which will have a genuine practical application based on sound physiological principles. I have frequently been identified with a movement which stresses the need for protein. I do not wish to reject this identification but to elaborate its basis.

My argument is not as some have supposed, that a high protein diet is desirable, but that an *adequate* amount of protein is necessary. Few, if any, students of the subject would quarrel with this, although much current argument revolves around the term 'adequate'. There is considerable disagreement among nutritionists as to the optimum protein requirements and when one consults the literature on the subject, it is distressing to find so many assumptions replacing facts.

Some discussion has also arisen as to whether there is such a condition as protein deficiency. Those of us with experience of fasting are aware of the fact that the organism can maintain nitrogen needs throughout an extensive period without food. This seems inconsistent with the well-publicized statement that the body does not store protein, and in the sense in which it stores carbohydrates as glycogen in the liver and muscles, and fat in the organs and cutaneous tissues and elsewhere, this is probably correct. But as tissue structures are broken during the fasting process, materials (amino acids)

are made available for utilization. It is true that protein deprivation has to be prolonged and extreme in order to produce obvious signs of its inadequacy, and even here it is not necessarily only a problem of protein.

The complex physiological processes involved in digesting, absorbing and assimilating the materials ingested is such that it is unwise to make predictions about the effect of an isolated food element. Rather, the hygienist is inclined to study the total impact of food on the organism and strive to relate the theoretical concepts of nutrition to a practical situation. It is necessary to dissociate ourselves from nutrients in feeding our patients and deal with foods that are complex parcels of numerous nutrients. In addition the hygienist has always, stressed the need to consider the feeder. In nearly all diets and nutritional studies, the individual variations of those consuming the food is overlooked. Notable exceptions to this exist, but only in a general way, such as the dietetic control of the diabetes, diets for obesity, the regulation of diet in phenyl-ketonuria and so on. This maneuver is not so much a consideration of individual needs and capacities as a therapeutic approach to disease, that is, treating symptoms. Such an action may be justified on practical grounds but it has serious theoretical inconsistencies and is objectionable philosophically because it does not radically solve any of the most crucial problems.

Because of the serious deficiencies of generalizations, hygienists are often reluctant to make specific extensions of their principles. Consequently, at this point, I should absolve myself from apparent infallibility in the pages that follow wherein I have made categoric statements concerning qualities and quantities of food. There is always the individual consumer, whose ever varying needs and capacities must dominate his requirements. Hygiene, in its proper role of education, should teach us to respect our limitations and learn our needs, so that we can adequately supply them. What I have suggested should remain a tentative generalization requiring individual modification.

An inadequate diet may be a temporary necessity. By this I mean that food, and particularly protein which is more difficult to digest than many other food elements, should be consumed within individual capacities rather than according to charts, tables and graphs. There are times when the organism will be unable to utilize satisfactorily an adequate amount of a nutrient, and less will suffice. A consequent loss of weight and possibly energy may result, but this could conceivably be even greater if the extra food is forced into a reluctant feeder. Fasting usually, but not always, involves some loss of weight (this may be disputed, but the apparent contradiction involves fluid changes and not flesh). It is a procedure employed in special circumstances; it is most effective when the desire for food is lacking, when there is a dimished capacity to use food. The feeder must therefore learn to balance his diet and balance his intake. As we no longer live in a natural environment, one that would supply all our needs selected according to inherent demands, some knowledge of food and feeding is essential, if we are to maintain health and vigor. Man's success or failure depends upon the use of his rational faculty. He can choose to respect his bodily (mental, emotional and physical) needs and supply them, or he can ignore them and suffer the consequences.

Conventional nutritionists argue that protein must be eaten with a carbohydrate, otherwise the amino acids derived therefrom will be broken down by the liver (de-amination). This is called the 'protein sparing' effect of carbohydrates. If this is true, (and the experiments the claim is based are highly suspect), only a small quantity of carbohydrate is necessary. As indicated earlier, we do not eat nutrients and an examination of analyses of vegetable proteins reveals that they contain sufficient carbohydrates to provide the required conditions to prevent deamination. Animal proteins, on the other hand, do not. Their carbohydrate content is negligible.

Proteins combine best with nonstarchy vegetables. They should not be eaten with concentrated carbohydrates, either starch or sugar, nor with concentrated fats. Their use with fruit is not generally advocated.

Hygienists are almost unanimous in their agreement that nuts represent the best source of protein for man. It is a fact that people have developed tremendous muscular strength and vigour on an exclusively vegetarian diet. There are no special properties in animal foods which confer superiority over vegetable sources of nutrients. It may be categorically stated that vegetable proteins, especially nuts, have the following advantages over animal products:

1. They are generally eaten raw; uncooked proteins are superior.
2. They do not contain toxic end products of metabolism, as is inevitable with meat and fish.
3. They are generally much fresher. No matter what precautions are taken, flesh decomposes after the death of the animal, and meat is usually many weeks old before it reaches the table. Some putrefactive poisons are inevitable.
4. The present method of raising animals domestically leaves much to be desired. Most animals are unhealthy and have to receive regular treatment from veterinary scientists. At present, nuts are subject to few contaminating influences, far less than our other fruits and vegetables.

The grains and cereals do not represent any art of the natural diet of man. They are not essential to life and health and should certainly be omitted from the diets of infants and young children. Where they are included, they should be eaten whole, unprocessed and dry. The habit of eating cereal products with milk or other fluids such as juices is objectionable and conducive to fermentation. If they are included in the diet, thorough mastication is essential.

Cereal proteins are almost invariably incomplete and should not be used.

Article #3: Food Combining By Dr. Herbert M. Shelton

An intelligent reader who has done much personal experimenting with foods and diets writes me as follows:

"It is surprising that of all the foods I've eaten, I find the banana the best and the least troublesome. Of course I'm talking about the ungassed banana. The gassed ones do give me some trouble, even such easily digested foods as the orange, apple, grape, etc., if overeaten, will cause distress. I realize one should not overeat on any food, but I do find that the ripe banana even if eaten to excess does not seem to do me any harm. Also, the banana seems to be a complete meal all by itself. It eaten with other foods, it can cause trouble. It really can't be appreciated unless eaten alone. Even if combined with sweet fruits (dates, figs, raisins, peaches, grapes) it is not digested as well as when eaten alone. It seems to be a good food for both the hard laborer and sedentary worker. I am praising this fruit because by most people it is looked upon as 'monkey food' and of little importance as far as nourishing the body. I don't know how long one can live on the fruit alone, but I think with the addition of some nuts or seeds and some leafy vegetables one could probably maintain good health. This should be a comparatively simple diet; not too expensive. Since I do not have the facilities for cooking and preparing elaborate meals, "I think this could be the type of diet I can live on."

This reader's experience verifies my own. While I have found that bananas combine fairly well with dates, raisins, grapes and a few other sweet fruits and with green leafy vegetables, such as lettuce and celery, I have noted that they digest best if eaten alone. This calls to mind the fact that Tilden, also,

after much testing of the matter, reached the conclusion that bananas are best eaten alone. Tilden's view, like that of the writer of the foregoing letter, was based upon tests made with the ungassed banana. Gassed bananas do not ripen and can hardly be said to form desirable additions to man's diet.

The green banana is an almost insoluble starch; the ripe banana (ungassed) is a predigested sugar. It is quite probable that it is this sugar that makes a poor combination with other foods. As the gassed banana does not ripen, but rots instead, while still in the starch stage which is practically insoluble, it would seem quite natural that it should give trouble in digestion, even if eaten alone.

The banana, which contains about 1.30 per cent protein, is abundant in most of the minerals required by the body and is rich in vitamins. Dr. Carios Arguello, of Nicaragua, introduced me to a native strong man, while I was visiting in his country a few years ago, who stated that he lived largely on bananas, eating them in large quantities and that he found that they sustained him in health and strength as none of the other foods did. He had one advantage over those of us who live in the United States; namely, he could get his bananas tree ripened and fresh from the banana tree. This is an advantage of considerable importance.

Article #4: Chlorophyll And Hemoglobin By Viktoras Kulvinskas

For ages men have puzzled over the question - "What makes grass green?" About a century ago, chemists named the green pigment in growing plants chlorophyll.

A certain belief evolved about this green fluid. The fact that herbivora build hemoglobin (blood cell pigment) on a diet composed of leafy greens invites the hypothesis that derivatives of chlorophyll may be used in making hemoglobin. A Dr. Abderhalden, in his textbook, suggests that blood pigment might be made from plants.

Added to this biological relationship is the chemical similarity between chlorophyll and hemoglobin This was suggested by Verdeil in 1851, though on the basis of invalid evidence. It was substantiated in 1879 by Hoppe-Seyler, who showed a similarity between hematin and chlorophyll derivatives.

Willstater's work between 1906 and 1913 identified chlorophyll as an unstable water soluble magnesium compound characterized by ester groups of methyl and phytyl alcohol. He further showed both chlorophyll and hemoglobin to be closely related; both had some phyrrole fragments.

The years of research that were stimulated by Verdeil's hypothesis culminated in the series of brilliant investigations by Hans Fisher, for which he was awarded the Nobel Prize in 1930. He and his co-workers finally established the correct structure of hemin, part of the hemoglobin, by synthesis, and showed the true relationship to chlorophyll. They observed that the chlorophyll molecule closely resembles hemin, the pigment which, when combined with protein, forms hemoglobin. The latter is present in the red corpuscles of the blood, and by carrying oxygen to the tissues, makes the production of energy and life feasible. One of the major differences between chlorophyll and hemin is that chlorophyll contains magnesium, while the hemin molecule contains iron for the central atom. Note, hemoglobin is one of the most important constituents of cells; it makes up three quarters of the solid content. Owing to the close molecular resemblance between chlorophyll and hemoglobin, it was

believed by Frans Miller, another scientist, that chlorophyll is nature's blood-building element for all plant eaters and humans. He writes: "Chlorophyll has the same fast blood-building effect as iron in animals made anemic." This has led to a great deal of controversy.

What exactly is anemia? According to Webster's dictionary, anemia is a condition in which there is a reduction of the number of red blood corpuscles or the total amount of hemoglobin in the blood stream or both. Thus, anemia is an excellent vehicle for the study of the relationship between food and hemoglobin count.

The first scientist to demonstrate the regenerative effect of chlorophyll on animals was Dr. Emil Burgi, who, in 1916, observed that rabbits rendered anemic by bleeding recovered more rapidly when chlorophyll was added to their diet.

Scott showed that a diet of milk, white bread and chlorophyll rebuilt blood faster than bread and milk. Scott and Delor noted that iron-and-copper-free alfalfa extract relieved milk induced anemia.

Patek and Minor, in clinic study with a rare type of anemia caused by pigment scarcity, observed a small positive increase in hemoglobin concentration on intravenous injection of chlorine derivative. Dr. Fisher in Germany announced that for some time he had been using chlorophyll in the treatment of anemia with promising (although by no means conclusive) results.

In another clinic study, Dr. Patek used fifteen adult patients with chronic hypochronic anemia. They were given chlorophyll and allied substances, and were placed on house diets free of meat and eggs, whereas the diet was adequate in all other respects. The crude chlorophyll was a tar-like substance extracted from alfalfa leaves. It was found that chlorophyll alone was not effective. When chlorophyll and its derivatives were administered, there was an increase in hemoglobin and improvement in the sense of well being.

Other workers have reported curative effects of chlorophyll and its derivatives in a wide variety of anemias: protein deficiency, hemorrhagic, phenyl hydrazine poisoning, pernicious, hypochronic of unknown etiology and "experimental nutritional anemia" of unidentified character. Some of the reports are based on clinical studies, while others are the results of animal experimentation.

J. Howell Hughes and A.L. Latner, from the Department of Physiology, University of Liverpool, in a highly discriminative experiment, finally resolved the question of the blood regeneration capacity of chlorophyll. Rabbits were made anemic by daily bleeding, reducing the hemoglobin level to two-fifths of the normal value. The rabbits were split into two groups. The experimental received in diet chlorophyll in oil, the control only oil.

They performed five experiments. Three were with varying degrees of pure chlorophyll, one with large doses of crude chlorophyll (unrefined), and one with magnesium-free chlorophyll derivatives. The following is a summary of their findings.

1. Pure chlorophyll in large doses has no effect on the speed of hemoglobin regeneration after hemorrhage. It seems large doses are toxic to the bone marrow.
2. Very small doses of pure chlorophyll markedly increased the speed of hemoglobin regeneration to approximately its previous level.
3. Crude chlorophyll is effective even in large doses. Hughes concludes: "It seems, therefore, that the animal body is capable of converting chlorophyll to hemoglobin." This is in agreement with Zin, who, however, showed the effect of chlorophyll injection on the red blood cell count of animals not rendered anemic.

Thus we see how chlorophyll can aid in rebuilding the bloodstream. Without correcting all the causes of anemia, the chlorophyll results are temporary in nature and not consistently workable with every

individual. If, however, the individual was to be placed on organic live foods and on one of the richest crude forms of chlorophyll, then the results are always the same, and the anemic condition disappears. Rev. Ann Wigmore, in clinical studies, has proven this many times.